

REMARKS

Claims 1-8, and 16-33 and 35 are pending in the present application, claims 14 and 35 having been cancelled herein. The Examiner's action dated September 21, 2005, has been received, and its contents carefully noted. Favorable reconsideration is respectfully requested.

Response to §112, first paragraph rejection

Claims 1-8, 14, 16-35 were rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. Applicant respectfully traverses this rejection for the following reasons.

With respect to claim 1, the Office Action alleges that the phase

traveling direction data relative to the traveling route having been traveled in the past is read-out from a memory means and frequency of the traveling direction is obtained.

Applicant respectfully invites the Examiner's attention to pages 28 and 29 of the present application. Applicant submits that the first full paragraph on page 28 and the paragraph bridging 28 and 29, along with Fig. 2, fully supports this claimed feature. Particular attention is drawn to the last sentence of the paragraph bridging pages 28 and 29 which states

in order to determine whether or not to give the voice direction about the school zone for the next occasion to pass the area, the date and time of the voice direction message is stored as the record (step S8), and the process is completed.

Further, the second to last sentence of the first full paragraph on page 28 states

when no school zone is detected within 500m during the step S1, past voice direction regarding that particular school zone is referred from the record thereof, so as to identify if the voice direction of the school zone has been given in the last one month (step S2).

Applicant respectfully submits that at least these sentences support the claim language presented in the last amendment, as well as the claim amendment presented in this amendment.

With respect to claim 3, the Office Action asserts that the phrase "probability relating to performance of the traveling direction" is not supported. The Examiner's attention is invited to page 30, lines 12-16 of the present application. Applicant respectfully submits that this sentence, which states

[a]lternatively, it may be set to give the direction without recording the past notification and switch (or select) whether or not to give the direction notification corresponding to calculation result of a predetermined probability (50% or 10%, for example) for each time the direction is to be given.

Applicant has amended claim 3, however, to delete the term "relating to the performance of the traveling direction." Applicant submits that the claim as presented in the previous amendment, and as amended in this current amendment, is supported at least by the above-quoted passage on page 30.

The Examiner asserts that the phrase "the pluralities of the areas are considered to be in the same group and identified to notify the direction" of claim 7 is not found in the specification. Applicant respectfully disagrees. Applicant invites the Examiner's attention to page 30, lines 16-24 which states:

Moreover, instead of switching the give or not-give the direction based on passage of the same area or the same traveling route, by considering a plurality of areas or traveling route such as school zones or expressway entrances as the same group, switching of the give and not-give the direction may be reflected in the same group existing in another position corresponding to switching of the with or without the direction on the traveling route of the same area.

Further, Applicant has amended claim 7 to clarify the language, to recite "said means for determining is operative to give the notification of the direction only once for each group." Applicant respectfully submits that this cited section at least, supports this claim limitation.

With respect to claim 26, the Examiner asserts that the phrase "the monotony driving detection means sets reference speed candidates on a high-speed side and low-speed

side of a pre-set reference speed respectfully," is not supported in the original disclosure. Applicant respectfully disagrees and invites the Examiner's attention to pages 45 and 46, and in particular, the paragraph bridging those two pages, which fully supports this claimed feature. However, Applicant has amended claim 26 to clarify the language which now states

the monotony driving detection means sets reference speed candidates above and below a pre-set reference speed, sets the reference speed range between one of the reference speed candidates faster than the set reference speed and one of the reference speed candidates slower than the set reference speed...

Applicant respectfully submits that this claimed feature, as well as the amendment previously filed, is supported in the at least by the paragraph bridging pages 45 and 46.

With respect to claim 28, the Examiner asserts that

a voice output means for outputting a voice warning when the driving timer continues traveling distance of the car is detected by the comparative means as over the pre-set reference value,

is not supported by the original disclosure. The Examiner's attention is invited to pages 43-44 and Fig. 8 of the present application. For example, the first full sentence on page 43, which states:

When the car drives during the day time, whether or not the driving time exceeds 3 hours or the driving distance exceeds 300 km is checked (step S37), and if it exceeds, the device recognizes that it is a long

drive or long distance drive, and the warning direction to call for the driver's attention is outputted (step S36).

fully supports the claim, as does the first sentence on page 44, which states:

When it is determined that the car is driving in the night time in the step S34, whether or not the driving time exceeds one hour or the driving distance exceeds 100 km is checked (step S35), and if so, it recognizes it is a long drive or long distance drive and the warning direction may be outputted (S36).

The Examiner asserts that the phrase "the unsafe driving detection means detects abrupt steering by a given amount of rotation of the vehicle" is not supported, in claim 31. Applicant invites the Examiner's attention to pages 49, 51-52 and 53 on which support for this claim limitation can be found. In particular, the first sentence of the second full paragraph on page 49 states:

[i]n the present embodiment, a vibration gyro, i.e., angular velocity sensor, is used as the direction sensor 1, and it detects not only the moving direction of the vehicle, but also abrupt steering of the steering wheel.

Although the text on pages 51-53 supports the claim, the Examiner's attention is most particularly invited to the second to last sentence of the first full paragraph on page 53 which states:

[m]oreover, in the above described embodiment, the abrupt steering of the

steering wheel is detected by the rotation angle of the vehicle due to direction change of the vehicle.

This, along with the other cited text, fully supports this claim limitation.

In claim 34, the Examiner asserts that "the voice output means is given in a certain ratio relative to a number of certain plurality of times or relative to once in a week or once in a month," is not supported in the original disclosure. Applicant has canceled this claim, but has recited the subject matter thereof in independent claim 29. Accordingly, claim 29 now includes the recitation that "the voice warning output by the voice output means is output a variable number of times as determined by driving condition." This amended claim feature, as well as the amendment presented in the previous response, is supported on page 53 of the present application, and most particularly by the sentence beginning on line 7 which states:

[f]or example, for regular service trucks, which take the same route through the year, with the warning is outputted only once in a certain number of times, once a week or a month.

For these reasons, Applicant respectfully submits that the claims are fully supported by written description of the application as originally filed and request withdrawal of the rejection under 35 U.S.C. §112, second paragraph for failing to satisfy a written description.

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Response to §112, second paragraph indefiniteness rejection

Claims 3, 7, 8 and 18-36 were rejected under 35 U.S.C. §112, second paragraph, alleging that certain specified language is indefinite. This rejection is respectfully traversed for the following reasons.

In claim 3, the Examiner objected to the phrase "probability relating to the performance of the traveling direction." Applicant has amended claim 3 to remove this recitation.

Claim 7 was rejected based on the phrase "the plurality of the areas are considered to be in the same group and are identified to notify the direction." Applicant respectfully submits that this phrase was not present in the claim reflected in the amendment filed on January 23, 2006. Nonetheless, Applicant has further amended claim 7 to recite "said means for determining is operative to give notification of the direction only once for each group." Applicant respectfully submits that this fully satisfies 35 U.S.C. §112, first and second paragraphs.

Claim 26 was rejected on the basis of the phrase "the monotony driving detection means set reference speed candidates on a high speed side at a low speed side of a pre-set reference speed respectively. As noted above, this phrase

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has been removed and amended. Applicant respectfully submits that the claim as amended is clear and definite.

Claim 28 was rejected on the basis of the phrase "long driving or long distance traveling." This rejection was not understood because the phrase was deleted in the amendment filed on January 23, 2006. However, Applicant notes that claims 18 and 19 did contain this phrase. Applicant has now amended these claims to remove this language.

The Examiner objected to the phrase "direction warning device" in claims 29-35. This phrase has been changed to "travel warning device" to overcome this rejection.

Claim 34 was rejected based on the phrase "the voice output means is given...once in a month." This claim has been canceled, thus mooted the rejection thereof.

In view of the above amendments and remarks, Applicant respectfully submits that all of the claims satisfy the requirements of 35 U.S.C. §112, second paragraph. Withdrawal of this rejection is thus respectfully requested.

Response to §112, second paragraph omitted elements rejection

Claims 4 and 31-33 were rejected under 35 U.S.C. §112, second paragraph as allegedly being incomplete for omitting essential elements. The Examiner indicated that the omitted elements are "wherein there are plurality of different types of notification of the direction" in claim 4 and

"detects abrupt steering" in claims 31-33. This rejection is not understood, since these elements do appear in the claims as previously amended and as amended in this response. If this rejection is maintained, the Examiner is requested to more particularly explain his concerns so that they may be properly addressed.

Response to prior art rejections

Claims 1-8, 14 and 16-27 were rejected under 35 U.S.C. §102(b) as being anticipated by Urano (U.S. Patent No. 5,990,898). Claims 28-30 and 34-35 were rejected under 35 U.S.C. §102(e) as being anticipated by Okuda (U.S. Patent No. 6,262,657). Claims 31-33 were rejected under 35 U.S.C. §103 as being unpatentable over Urano in view of Okuda. These rejections were respectfully traversed.

In paragraph 13, beginning on page 9, of the Office Action, the Examiner indicates that various phrases, which are termed "intended use or field of use" are essentially ignored and do not serve to patentably distinguish the claim structure over that of the reference. Generally, and without identifying and discussing each of the objected to phrases at this point, Applicant notes that these phrases are functional language that provide function for particular means that are defined in the claim. As such, and because no claim language can be ignored, the Examiner has requested to further consider

these phrases when considering the patentability of the claims.

With respect to the particular claim rejections, Applicant notes as follows.

Claim 1 has been amended to provide structure for the claimed invention. In particular, claim 1 recites a travel direction device in which a direction about a traveling route is set, comprising a memory for storing and reading out traveling direction data relative to the traveling route having been traveled in the past, means for obtaining frequency of the traveling direction, and means for determining when notification of the direction is to be given. The means for determining is operative to give the notification of the direction less frequently than a number of times a car has driven the traveling route if the car has driven the traveling route a plurality of times. This is not taught, disclosed or made obvious by the prior art of record.

Urano related to a multi-media data display device for displaying a plurality of multi-media items on a display screen. One embodiment is disclosed in which the display relates to traffic regulations, such as speed limit, "slippery when wet" signs, and the like, being displayed on the roads within a school zone. This embodiment is discussed beginning on column 25 of the patent. However, there is no disclosure

of the claimed memory which stores and reads out traveling direction data relative to the traveling route having been traveled in the past, the means for obtaining, or the means for determining when notification of the direction is to be given, wherein the means for determining is operative to give the notification of the direction less frequently than a number of times a car has driven the traveling route if the car has driven the traveling route a plurality of times. For at least this reason, Applicant respectfully submits that claim 1 is patentable over the prior art of record.

Claims 2-8 depend from and include the recitations of claim 1. Applicant respectfully submits that claims 2-8 are patentable in and of themselves, and as they depend from and include the recitations of claim 1, which is patentable for the reasons discussed above.

Claim 16 recites a travel direction device including a controlling means for setting a predetermined area centered about a school as a school zone and giving warnings about cautions of travel when a car drives roads in the set school zone based on school days information and school time information, and an output means for outputting the warnings from the controlling means. The controlling means sends a deceleration command signal to a control device of the car when the car drives through the school zone so as to reduce

the speed. This is not taught, disclosed or made obvious by the prior art of record.

As discussed above with respect to claim 1, Urano discloses an embodiment in which the display relates to traffic regulations, such as speed limit, "slippery when wet" signs, and the like, being displayed on the roads within a school zone. However, Urano does not disclose a control means which sends a deceleration command signal to a control device of the car when the car drives through the school zone so as to reduce the speed. For at least this reason, Applicant respectfully submits that claim 16 is patentable over the prior art of record.

Claim 17 recites a travel direction warning device including a continuous driving detection means for detecting a continuous driving condition of a car by comparing the driving condition of the car with a pre-set reference value of the driving condition, and a voice output means for outputting a voice warning when the continuous driving is detected by the continuous driving detection means. The voice output means changes expressions of the voice warnings, age and sex of the voice, depending on time zone, season, events or a number of times of travel. This is not taught, disclosed or made obvious by the prior art of record.

Applicant notes that the Examiner prefaces the rejection by the phrase "as best understood." Since the Examiner has not entered any formal rejections or objections to this claim, i.e., under 35 U.S.C. § 112, the Examiner's comment is not understood. If this rejection is maintained, and the Examiner still is concerned that the claim is not well understood, he is requested to provide an explanation of his concerns so that they may be properly addressed.

Turning now to the merits of this rejection, The Examiner's attention is invited to Figs. 8 and 9 of the present application, along with the accompanying disclosure on pages 41-48. Applicant notes that the first sentence on page 48 states:

[a]ccording to the present embodiment, when the continuous driving detection means 21 detects continuous driving such as long driving or long distance driving, or the monotony driving detection means 22 detects monotony driving where the car drives on the local road for a certain period of time within the reference speed range, the warning output means, such as the liquid crystal display 6 and the speaker 19, outputs a message to call for the driver's attention to warn of doze driving. It is thus possible to prevent doze driving before it happens.

As discussed above with respect to claim 1, Urano discloses an embodiment in which the display relates to traffic regulations, such as speed limit, "slippery when wet" signs, and the like, being displayed on the roads within a school

zone. However, Urano does not disclose a continuous driving detection means for detecting a continuous driving condition of a car by comparing the driving condition of the car with a pre-set reference value of the driving condition. For at least this reason, Applicant respectfully submits that claim 17 is patentable over the prior art of record.

Claims 18-23 depend from and include the recitations of claim 17. Applicant respectfully submits that claims 18-23 are patentable in and of themselves, and as they depend from and include the recitations of claim 17, which is patentable for the reasons discussed above.

Claim 24 recites a travel direction warning device comprising a monotony driving detection means for detecting whether or not a car drives within a preset reference speed range for a predetermined period of time when driving on local roads, and a voice output means for outputting a voice warning when the monotony driving detection means detects that the car drives within the reference speed range for the predetermined period of time. This is not taught, disclosed or made obvious by the prior art of record.

Applicant respectfully submits that Urano does not disclose the claimed monotony driving detection means for detecting whether or not a car drives within a preset reference speed range for a predetermined period of time when

driving on local roads. Applicant respectfully notes that the Office Action does not indicate where in the reference this feature may be found. If this rejection is maintained, the Examiner is requested to cite to the specific teaching on which the rejection is based. For at least these reasons, Applicant respectfully submits that claim 24 is patentable over the prior art of record.

Claims 25-27 depend from and include the recitations of claim 24. Applicant respectfully submits that claims 25-27 are patentable in and of themselves, and as they depend from and include the recitations of claim 24, which is patentable for the reasons discussed above.

Claim 28 recites a travel direction warning device, including a comparator means for comparing continuous driving time or continuous traveling distance of a car with a pre-set reference value of the driving time or traveling distance, and a voice output means for outputting a voice warning when the driving time or continuous traveling distance of the car detected by the comparator means is over the pre-set reference value. The voice output means changes expressions of the voice warnings, age and sex of the voice, depending on time zone, season, events or a number of times of travel. This is not taught, disclosed or made obvious by the prior art of record.

Okuda discloses a driver alerting system, in which, when a driver uses a cell phone while driving, if the driving becomes unstable or a directional signal is operated and there is a large change in vehicle speed or direction, a telephone call detection apparatus and a running condition detection apparatus detect this condition and a controller generates a warning message, which is output to the driver. In the cited portion of the patent, col. 8, lines 49-62, Okuda discloses that the running condition detection apparatus 6 detects left-to-right, front-back, and vertical acceleration of the vehicle. Left-to-right behavior is detected by steering adjustments made by the driver; front-back behavior is detected by sudden starts and stops; and vertical-direction behavior is detected by detecting the road conditions (unevenness). There is no disclosure of a comparator means for comparing continuous driving time or continuous traveling distance of a car with a pre-set reference value of the driving time or traveling distance, as recited in claim 28.

Further, there is no disclosure of the voice output means changes expressions of the voice warnings, age and sex of the voice, depending on time zone, season, events or a number of times of travel, as recited in claim 28. In fact, Applicant respectfully notes that the Office Action does not indicate where in the reference this last feature may be

found. If this rejection is maintained, the Examiner is requested to cite to the specific teaching on which the rejection is based. For at least these reasons, Applicant respectfully submits that claim 28 is patentable over the prior art of record.

Claim 29 recites a travel warning device, including an unsafe driving detection means for detecting an unsafe driving condition by comparing the driving conditions of the car with a pre-set reference value for the unsafe driving condition, and a voice output means for outputting a voice warning when the unsafe driving condition is detected by the unsafe driving detection means. The voice output means changes expressions of the voice warnings, age and sex of the voice, depending on time zone, season, events or a number of times of travel. Additionally, the voice warning output by the voice output means is output a variable number of times as determined by driving conditions. This is not taught, disclosed or made obvious by the prior art of record.

Applicant has amended claim 29 to include the limitations of claim 34, rewritten to overcome the rejections under 35 U.S.C. § 112, first and second paragraphs. Applicant respectfully submits that Okuda does not disclose that the voice output means changes expressions of the voice warnings, age and sex of the voice, depending on time zone, season,

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events or a number of times of travel, and that the voice warning output by the voice output means is output a variable number of times as determined by driving conditions. In fact, Applicant respectfully notes that the Office Action does not indicate where in the reference these last two features may be found. If this rejection is maintained, the Examiner is requested to cite to the specific teachings on which the rejection is based. For at least these reasons, Applicant respectfully submits that claim 29 is patentable over the prior art of record.

The rejections of claims 30-33 and 35 are rendered moot by the amendment to claim 29. Further, claims 30-33 and 35 depend from and include the recitations of claim 29. Applicant respectfully submits that claims 30-33 and 35 are patentable in and of themselves, and as they depend from and include the recitations of claim 29, which is patentable for the reasons discussed above.

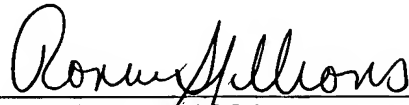
Applicant submits that the application is in condition for allowance and an early notice to this effect is most earnestly solicited. If the above amendment should not

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now place the application in condition for allowance, the
Examiner is invited to call undersigned counsel to resolve any
remaining issues.

Respectfully submitted,

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